

remember how fortunate we are to enjoy the rights our Founders embedded in our guiding document.

I ask unanimous consent that the editorial be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From The Caledonian-Record, Sept. 14, 2009]

IT'S CONSTITUTION WEEK: CELEBRATE OUR FREEDOMS

Every year, America's newspapers celebrate the United States Constitution by focusing on the document, with features and editorials that acknowledge the central place in America's freedoms that the Constitution possesses. We do it to assure that Americans, in the rush of making a living, of raising children, of growing up or growing old, and of all of the other distractions of our lives, do not forget the vision and the wisdom that almost miraculously guided our Founding Fathers in composing this document. It is as important today, indeed, probably more important, than it was in 18th century America.

This is Constitution Week. It is fitting that it should immediately follow the national commemoration of the worst, most deadly domestic terrorism attack in our history, Sept. 11, 2001. That attack, literally brought home that nowhere in the world are freedom loving people safe from the militant insanity of ideologically driven terrorists, in this case of radical Islamists. In previous epochal events, they were Nazis, Japanese imperialists, Marxists, and others. In every case, the adjuration that arose from 9/11 applies, and never more strongly than in reverence of the Constitution, "Never forget!"

For the last 200-plus years, there have been, and are now, those who would like to change our Constitution in ways that occupy the whole continuum, from updating its grammar to totally destroying it in the name of social action and the progressive insistence that only the evolution of the present to the future is relevant, that a document so old is a totally irrelevant relic.

Not so! Our Constitution is timeless and the most relevant guide to continuing our freedoms. Millions of Americans have died in its defense. Celebrate it!

#### 2009 DAVIDSON FELLOW AWARD RECIPIENTS

Mr. GRASSLEY. Mr. President, it is my distinct pleasure to bring before the Senate today the achievements of some of the most brilliant, inventive young minds in the United States. I take this time to acknowledge the 19 recipients of the 2009 Davidson Fellows Award, a scholarship awarded to exceptional students to assist them in furthering their education. These scholarships are given by the Davidson Institute for Talent Development to profoundly gifted individuals under the age of 18 who have completed academically rigorous projects that demonstrate a potential to make a significant, positive contribution to society. This year's recipients achieved academic distinction in the areas of science, literature, philosophy, out-of-the-box thinking, technology, and music. These young individuals are more than deserving of this honor and our recognition. I would like to take a few moments to describe what each recipient has accomplished.

In the realm of science, we have eleven remarkable young people, including Eric Sherman, from Ephrata, PA, who developed a technique that allows scientists to identify potential bone marrow donors for 6 percent of the cost and 1 percent of the time of traditional techniques. Using polymerase chain reaction and cycle sequencing, he sequenced the genes that determine a person's Human Leukocyte Antigen type. Eric then wrote a computer program to analyze the DNA sequence and return possible antigen matches. This technique can potentially be used to identify donors for other transplantable organs, such as kidney, liver, and lung, creating the opportunity to save hundreds of lives and millions of dollars each year. Eric is 15 years old.

A 17-year-old young woman from Albuquerque, NM, Erika DeBenedictis researched methods of identifying low-energy paths for spacecraft. By carefully planning the route a spacecraft will take, it is possible to reduce the amount of fuel needed by utilizing the natural gravity and motion of planets in the solar system. Erika developed an itinerary-based algorithm to reach specified destinations, which streamlines the process of finding low-energy paths. Such orbits are particularly useful for heavy spacecraft, in which self-propulsion is especially difficult. Use of low-energy paths would allow these spacecraft to reach previously impractical destinations.

A 17-year-old young man from Rochester, MI, Rahul Pandey created a negative index refraction lens made of metamaterials. Metamaterials have the unique property to bend electromagnetic waves of a certain frequency backward, so an image is possible on the opposite side of a lens. He modeled the energy flow of negative index materials in terms of lens geometry, refractive index, focal length, and source distance, finding a perfectly linear relationship. Rahul's work has applications in stealth technology, antenna elements, radio frequency signal switching, and lenses that do not adhere to the diffraction limit.

Aditya Palepu, from Oakton, VA, developed a pattern classification algorithm that extracts linear and Gaussian relationships from raw data using a bottom-up approach. Given any data set, all possible models are generated, iteratively weeded down, and refined to better fit the data. This algorithm is effective on benchmark Iris data and synthetic distributions, and was designed so the model library can be expanded to more data sets. Aditya's work has applications in facial/object recognition, data mining, trend analysis, and was used to classify a Washington, DC crime database revealing the clustering of criminal activity. Aditya is 17 years old.

From Woodbury, MN, Prithwis Mukhopadhyay researched the molecular mechanism by which carrageenan may induce pre-malignant cell transformation. Carrageenan is an FDA-ap-

proved food additive found in dairy products, processed meats, dog food, infant formula, and cosmetics. Using mammary epithelial cells, he found carrageenan reduced ASB activity and increased sulfated sGAG, especially chondroitin sulfate, which induced cell migration and pre-malignant transformation. At 16 years old, Prithwis' work shows how carrageenan influences breast cancer cell proliferation and migration.

Fiona Wood, from North Haven, CT, explored the brain's ability to perceive and measure interval time using late-spiking (LS) neurons. She created the first biophysically realistic computational model of an LS neuron, and used it to construct neural networks that can accurately and realistically encode time. For all animals, an ability to perceive and measure time is essential for a wide variety of tasks. Fiona's work can lead to better understanding of brain diseases in which interval time encoding is impaired, such as Parkinson's, Huntington's, and schizophrenia. Fiona is 17 years old.

A 17-year-old young man from Winston Salem, NC, Darren Zhu worked to develop more efficient data storage technologies by exploring nanofabrication methods for spintronics. Spintronics, or spin-based electronics, are inherently more powerful than electronics, as they exploit electron spin and subsequently are more sensitive than integrated circuit technology. He incorporated molecular self-assembled monolayers, or SAMs, into spintronics and performed surface analyses to find that isocyanide-based SAMs are a viable candidate for implementation in nanoscale spintronics fabrication. Darren's work has strong applications in nanotechnology, specifically in the field of nanolithography.

A 16-year-old young man from Addison, TX, Roman Stolyarov designed and produced an omnidirectional dielectric mirror for visible light using a unique one-step fabrication process. The mirror is composed of 12 ultrathin alternating layers of two chalcogenide glasses, which were deposited by thermal evaporation onto a transparent silicon dioxide glass substrate. Simulations show that doubling the number of alternating layers would produce near perfect reflectivity, a phenomenon impossible for silvered mirrors, given their inherent losses in the visible spectrum. Roman's process will allow for rapid manufacturing of wavelength specific mirrors with applications in radar filtration and fiber technologies.

From Teaneck, NJ, Yael Dana Neugut studied arsenic metabolism and renal function in an arsenic-exposed population in Bangladesh. She found that the association between urinary excretion of arsenic metabolites and creatinine is likely due to their shared metabolic pathway, and that creatine may be an effective way to prevent and treat long-term exposure to arsenic.

More than 100 million people worldwide are chronically exposed to high levels of arsenic and are at risk of serious diseases, such as cancer and heart disease. A randomized trial of creatine supplementation is currently underway in Bangladesh. Yael is 17 years old.

A 17-year-old young man from East Setauket, NY, Jason Karelis studied an enzyme called MenD that plays a role in the biosynthesis of a lipid called menaquinone in *Staphylococcus aureus*, the bacterium that causes staph infections. Menaquinone is an electron carrier crucial to *S. aureus*. Jason constructed a mutant strain of *S. aureus* with a disrupted MenD gene and observed its growth on media only with menaquinone added, evidence that MenD is vital for *S. aureus*. Staph infections are a major public health concern and Jason's work provides a platform for a new class of antibiotics.

From Hilo, HI, Nolan Kamitaki designed a computer simulation to determine how viral characteristics and medical supply distribution patterns affect an epidemic's spread across a social network. Starting with a particle-based simulation to analyze basic interaction rates, he moved to a small world network, modeling an epidemic's spread across a population. Nolan's findings showed that children, due to their greater degree of social connection, are most useful for prevention and are the most effective recipients of medical processes. Nolan is 16 years old.

In the area of literature, we have a young woman from North Potomac, MD. Amy Levine, a 16-year-old, examines the shades of gray between black and white in her literature collection, *Grayscale Unraveled*. She demonstrates how life choices that have the greatest impact initially do not appear to be choices at all, but have the potential to be the most transformative. Amy's portfolio explores the small yet important events that determine who we are and how we live, while breaking down the black and white decisions people make to show the grayscale that describes the world.

Also in the area of literature, we have Nicole Rhodes, a 17-year-old from Vancouver, WA, who created the portfolio *The Dictionary of Distance* to explore different facets of distance in writing. She considers the distance between a piece's narrator and characters, the space between the author and the work, and the space separating characters and other elements to determine how distance alters memory. Through this examination, Nicole is able to analyze the writing process, the writer's perspective, and the final written product. Her portfolio includes a variety of forms, styles, and subjects, united in this investigation.

From Indianapolis, IN, Doreen Xu explores the foundation of evil in her philosophy portfolio, *The Roots of Evil*. She delves into the human psyche to examine several distinct sources of evil, concluding that all human evil is

caused by frustrated human desire. Doreen explores this newly defined dimension of evil with an enlightened perspective, fostering a new method of viewing evil. She hopes this will allow evil to be more effectively combated, leading to a more progressive and harmonious global society. Doreen is 16 years old.

The first recipient in the world of music is Melody Lindsay, from Honolulu, HI, who believes we celebrate mankind's best achievements through music. In her portfolio, *Harping Around the World: Cultural Leadership for the 21st Century*, she draws on her experience as a harpist to connect with audiences. She is particularly interested in inspiring young people to discover and pursue their own passion for classical music. Melody, at age 17, has performed on and serves as a Cultural Ambassador for NPR's "From the Top" and was a Focus on Youth Performer for the ninth and tenth World Harp Congresses.

From La Crescenta, CA, Connie Kim-Sheng seeks to convey the insights of classical composers in her portfolio, *Inspired by Beauty: Piano Masterworks*. Her performance of pieces by Bach, Beethoven, Chopin, Debussy, and Ginastera provide musical texts that illuminate the span of human feeling and experience, demonstrating a multitude of complex harmonies. At 17 years old, Connie has performed on NPR's "From the Top," and for audiences in Sydney, Australia; Calgary, Canada; and Los Angeles. Through her music, Connie hopes to encourage greater respect for cooperation and pluralism in society.

A 13-year-old young woman from San Diego, CA, Sarina Zhang strives to show the beauty and emotional value of classical music in her portfolio, *Reaching out to the World with the Magic of Music*. Through performance, she strives to connect with her audience, moving them with the simple truth of classical music. A pianist and cellist attending The Juilliard Pre-College Division, she has been featured on NPR's "From the Top," performed at Carnegie Hall, and toured internationally with the San Diego Civic Youth Orchestra.

For exemplary works in the category of "Outside the Box," recipients include Allison Ross from Mercer Island, WA. She created a portfolio, *African and Western Heroes' Journeys in Literature: An Exemplification*. Against the backdrop of August Wilson's fiction and the constructs of Joseph Campbell's Hero's Cycle, she explores the relationship between classical Western and African hero mythologies. Allison, at 16, investigates the derivations, common motives and cultural differences between the two traditions offering original narratives and critical analysis. Through this work, Allison hopes that others will share her enthusiasm for exploring themes that unite our heritages.

And finally, in his "Outside the Box" project, a 15-year-old young man from

Cupertino, CA, Anshul Samar seeks to make learning a side effect of fun with his project, *Igniting Interest in Chemistry with Elementeo Chemistry Card Game*. In Elementeo, players battle with their element army, activate reactions, create compounds, and conquer opponents using black holes and slippery bases. Anshul hopes that by introducing young people to chemistry in a fun and interactive manner, they will discover a passion for science and pursue it throughout their lives.

These brilliant young men and women are essential for the success of their generation. It is our duty to recognize, support, and nurture their progression through academia as they mature into the leaders of their generation. We should consider ourselves privileged that some of the triumphs of these ingenious young minds have already born fruit. I would like to thank the Davidson Institute for making such scholarships available and for taking the time to seek out these worthy candidates. I would also like to thank each winner and applicant of the Davidson Award for showing to us the promise and potential your generation holds. We can rest assured that our future is in good hands.

#### TRIBUTE TO ERNIE HARWELL

Mr. LEVIN. Mr. President, today I pay tribute to the man whose voice was the sound of summer, to the man who guided Michiganders through baseball seasons for more than 40 years. I rise in tribute to Ernie Harwell.

For those who love baseball and the Detroit Tigers, Ernie Harwell's easy Georgia drawl on a summer evening has been a tonic after a hard day's toil. He has been our eyes and ears at the corner of Michigan and Trumbull and, later, at the team's new downtown ballpark. Since 1960, when Ernie broadcast his first Tigers game, until today, perhaps no person, no player nor manager, has been more closely identified with Tigers baseball. Certainly none has formed so strong an emotional tie with the fans of our team.

Ernie grew up in Atlanta, and he often tells fans that as a boy he was tongue-tied, coping with a speech impediment, but with therapy and hard work, he turned his voice into a tool so powerful it brought the game to life. His first broadcasting job was with the minor league team in his hometown, but in 1948, when broadcasting legend Red Barber of the Brooklyn Dodgers fell ill, Dodgers general manager Branch Rickey called down to Atlanta. He asked if he could bring up young Ernie to fill Barber's seat at Ebbets Field. OK, the Atlanta general manager replied, but you will have to give me something in return. And so Ernie became the first and so far only broadcaster in baseball history to be included in a trade, sent to Brooklyn for a minor league catcher.

That was one of Branch Rickey's finest deals. In Brooklyn and then in Baltimore, Ernie honed his craft and won